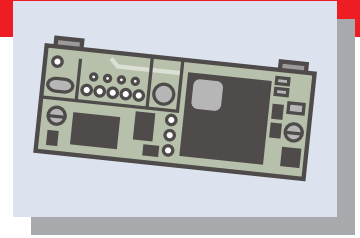


COM – Communication Module



Plug-on module as fieldbus interface

- Interchangeable plug-in modules for all leading fieldbus technologies
- Various formats with different installation possibilities
- Same driver interfaces for all modules
- Direct access to the process data in the Dual-port-Memory
- Fast “Time to market”
- No development risk
- Proven fieldbus technology
- Cheaper than own development

Fieldbus integration for automation technology

Hilscher has been supplying communication modules (COM) for integrating fieldbus communication into the devices of automation technology for more than 10 years. These are complete fieldbus interfaces in a very small board with an easy to handle application interface. The simplest and most economical way of integrating proven communication technology into your devices.

Fieldbus communication in various formats

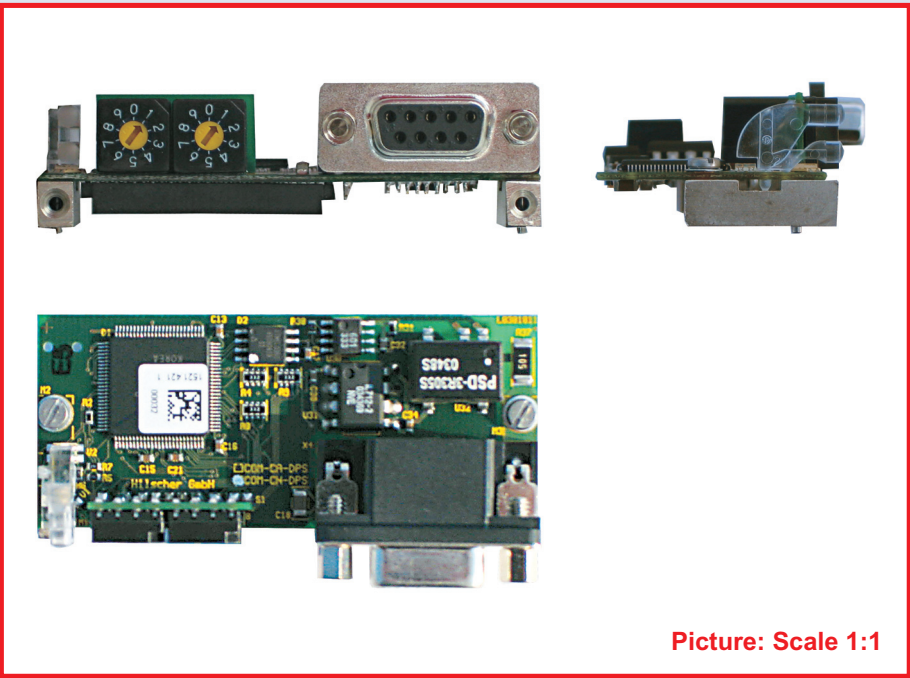
Based on past experience, Hilscher has now brought a new generation of COM modules onto the market.

These take into account the high degree of integration of special ASICs as well as new technologies such as the low-power consumption 3.3 V components. Special attention has been paid to the different installation possibilities and the high requirements of the mechanics and the interference resistance when installing the fieldbus plug onto the module.

COM – Communication Module

Plug and Play communication for automation

- Extremely compact size
- Variants with and without fieldbus connectors
- Variants with straight or angled connectors
- Compact Host plug with 1.27 mm matrix
- Metal blocks for solid mechanical installation
- Solid PE connection via one of the metal blocks
- Fastening the front cover of the metal blocks
- Centering pins for precise installation on the Host board
- Host-Interface for max. 32 KByte Dual-port-Memory and max. 16 Bit data width
- Serial interface for diagnostic or as customer-specific Host-Interface
- CAN interface for special applications
- Reduced power consumption to 3.3 V technology
- Available in an extended temperature range



Picture: Scale 1:1

COM-AS

For parallel installation underneath a front plate with vertically directed fieldbus plug/LEDs/switch with minimal component height of 10 mm.

Module size (L x W x H) 40 x 70 x 26 mm



COM-BA

For right-angled installation behind a front plate with angled fieldbus plug/LEDs with a minimal front width of 40 mm.

Module size (L x W x H) 40 x 70 x 21.5 mm

As a variant COM-BN with signals for fieldbus/LEDs/switch on Host board.

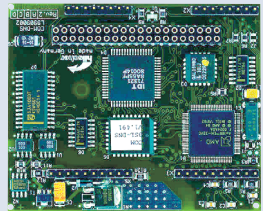


COM

Signals for fieldbus/LEDs/switch only on Host board.

Module size (L x W x H) 77 x 63 x 15.5 mm

Not for new developments!



COM-CA

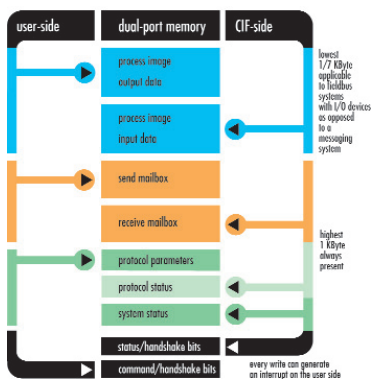
For right-angled installation behind a front plate with angled fieldbus plug/LEDs with a minimum module size.

Module size (L x W x H) 70 x 30 x 21.5 mm

All plugs on the outer edge – saves space on the Host board.

2.5 mm free space below the module for SMD components on the Host board.

As variant COM-CN with signals for fieldbus/LEDs/Switch on Host board.



Identical “easy to use” application interface

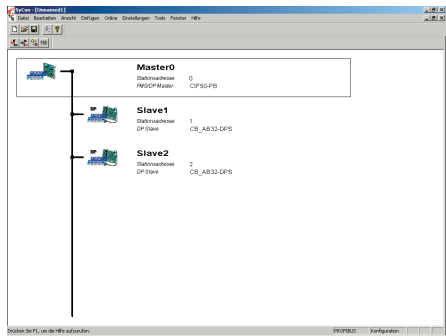
The exchange of data with the Host system occurs via a simple to handle Dual-port-Memory interface that is the same on all modules. The process variables are provided with a process data image and commands are transferred via a Mailbox. The module accepts the data and carries out the data exchange via the fieldbus independently without loading the Host system. The storage of the process variables is identical for all modules. What is different are the parameters of the diagnostic and status structures as well as the fieldbus-specific commands. When this is properly taken into account, the modules of various fieldbus systems can be interchanged without causing any major changes to the applications.



One driver for all modules

The integration of the COM Module in the Host environment is done with an universal driver. A comprehensive function library in C source code is available for this purpose. All functions are independent of the fieldbus system. The access to the process data image of the process variables is achieved via uniform data structures.

Integration on this basis can be extended from one fieldbus system to others with little effort.



Master configuration via SyCon

The configuration takes place directly via the Dual-port-Memory or via the serial diagnostic interface. For the more complex Master modules the SyCon system configurator is additionally available, whereas slave modules are easiest configured directly from the application. The configuration is stored on the module and is also not lost in the un-powered condition.

COM – Technical Information

Product overview

Fieldbus	Communication module 40 x 70 mm Vertical plug	
AS-Interface-Master	COM-AS-ASM	
CANopen-Slave		
CANopen-Master		
CC-Link-Slave		
ControlNet-Slave		
ControlNet-Master		
DeviceNet-Slave	COM-AS-DNS	
DeviceNet-Master	COM-AS-DNM	
Ethernet		
InterBus-Slave		
InterBus-Master		
Modbus Plus		
PROFIBUS-Slave	COM-AS-DPS	
PROFIBUS-Master	COM-AS-DPM	
SERCOS		
Protocol RS 232C-Interface		
Protocol RS 422/485-Interface		
Fieldbus	Communication module 40 x 70 mm angled plug	Communication module 40 x 70 mm without plug
AS-Interface-Master	COM-BA-ASM	COM-BN-ASM
CANopen-Slave		
CANopen-Master		
CC-Link-Slave		
ControlNet-Slave		
ControlNet-Master		
DeviceNet-Slave	COM-BA-DNS	COM-BN-DNS
DeviceNet-Master	COM-BA-DNM	COM-BN-DNM
Ethernet		
InterBus-Slave		
InterBus-Master		
Modbus Plus		
PROFIBUS-Slave	COM-BA-DPS	COM-BN-DPS
PROFIBUS-Master	COM-BA-DPM	COM-BN-DPM
SERCOS		
Protocol RS 232C-Interface		
Protocol RS 422/485-Interface		
Fieldbus	Communication module 70 x 30 mm angled plug	Communication module 70 x 30 mm without plug
AS-Interface-Master	COM-CA	COM-CN
CANopen-Slave	COM-CA-ASM	COM-CN-ASM
CANopen-Master	COM-CA-COS	COM-CN-COS
CC-Link-Slave	COM-CA-COM	COM-CN-COM
ControlNet-Slave	COM-CA-CCS	
ControlNet-Master		
DeviceNet-Slave	COM-CA-DNS	COM-CN-DNS
DeviceNet-Master	COM-CA-DNM	COM-CN-DNM
Ethernet	COM-CA-EN	COM-CN-EN
InterBus-Slave	COM-CA-IBS	COM-CN-IBS
InterBus-Master		
Modbus Plus		
PROFIBUS-Slave	COM-CA-DPS	COM-CN-DPS
PROFIBUS-Master	COM-CA-DPM	COM-CN-DPM
SERCOS	COM-CA-SCEB	COM-CN-SCEB
Protocol RS 232C-Interface		
Protocol RS 422/485-Interface		
Fieldbus	Communication module 77 x 63 mm	
AS-Interface-Master	COM-ASM	
CANopen-Slave	COM-COS	
CANopen-Master	COM-COM	
CC-Link-Slave		
ControlNet-Slave	COM-CNS	
ControlNet-Master	COM-CNM	
DeviceNet-Slave	COM-DNS	
DeviceNet-Master	COM-DNM	
Ethernet	COM-EN	
InterBus-Slave	COM-IBS	
InterBus-Master	COM-IBM	
Modbus Plus	COM-MBP	
PROFIBUS-Slave	COM-DPS	
PROFIBUS-Master	COM-PB	
SERCOS		
Protocol RS 232C-Interface	COM-11	
Protocol RS 422/485-Interface	COM-12	

Technical data

AS-Interface	Master	
	2 Channels	
	62 Slaves	
	248 Inputs	
	186 Outputs	
ControlNet	Slave	
	Network Access Port	
	CIP, Peer-to-Peer	
	480 Words I/O data	
CANopen	Slave	Master
	510 Byte I/O data	127 CANopen-nodes
	32 Rx-/32 Tx-PDOs	7 KByte I/O data
	Min.Boot up	unlimited PDOs
	COB ID Distribution	Min.Boot up
	default/via SDO	COB ID Distribution
	Emergency Message	default/via SDO
	Life Guarding	Emergency Message
	Heartbeat	Node, Life Guarding
	Event-triggered	Heartbeat
	Remotely requested	Event-triggered
		Time-triggered
		Sync (cyclic)
		Sync (acyclic)
		Remotely requested
		CiA DS-401, -402, -406
CC-Link	Slave	
	max. 4 Stations with ea.	
	64 Bit I/O data	
	8 Words I/O data	
	Polling	
DeviceNet	Slave	Master
	510 Byte I/O data	63 Slaves
		7 KByte I/O data
		Bit-strobe, Poll, Cyclic,
	Bit-strobe, Poll, Cyclic	Change of State
	Change of State	Explicit Peer to Peer Msg.
	Explicit Peer to Peer Msg.	
Ethernet	7 KByte I/O data	
	BOOTP, DHCP, FTP, SMTP, SNMP, TCP/IP, UDP	
	Open Modbus, RFC 1006, Ethernet/IP, PROFINET	
InterBus	Slave	Master
	20 Words I/O data	128 Slaves
	PCP channel	512 Words I/O data
		PCP channel
		InterBus-Loop
		Generation 4
PROFIBUS-DP	Slave	Master
	368 Byte I/O data	125 Slaves
	DPV1-extension	7 KByte I/O data
		DPV1-extension
		class 2-services
		MPI-functions
SERCOS	Passive	
	Master or Slave dependent on driver	
Diagnostic connection	RS232C, potential-bound	
System interface		
	Dual-port-Memory	only COM
	Dual-port-Memory	
	25 I/O-Signals	COM
	UART	COM-C
	CAN	
Operating voltages		
	5 V/300-700 mA	COM
	3.3 V/450 mA	COM-A/-B/-C
Operating temperature		
	0 °C-55 °C	COM-A/-B/-C
	0 °C-55 °C	COM
	-20 °C-70 °C	optional
Dims. (L x W x H)		
	77 x 63 x 15.5 mm	COM
	40 x 70 x 26 mm	COM-A
	40 x 70 x 21.5 mm	COM-B
	70 x 30 x 21.5 mm	COM-C
Noise immunity, radiated noise		
	EN 50082-2	
	EN 55011 Cl. B	

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